

PRODUCTION OF ALUMINUM ALLOY CASTING

Publication number: JP8246118 (A)

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Applicant(s): UBE INDUSTRIES

Classification:

- International: C22F1/043; C 22C21/02; C22F1/00; C22F1/043; C22C21/02; C22F1/00; (IPC1-7): C22F1/043; C 22C21/02

- European:

Application number: JP19950043735 19950303

Priority number(s): JP19950043735 19950303

Abstract of JP 8246118 (A)

PURPOSE: To produce a uniform and excellent Al alloy casting improved in mechanical properties by subjecting an Al alloy casting with aging properties to solution treatment, thereafter subjecting it to plastic working at a specified working ratio and successively subjecting the same to artificial aging treatment. CONSTITUTION: An Al alloy casting with aging properties constituted of an Al-Si-Mg alloy contg., by weight, 4 to 13% Si and 0.1 to 0.7% Mg is subjected to solution treatment to form a supersaturated solid solution. Next, this Al alloy is subjected plastic working such as upset forging at 2 to 10% working rate. After that, this worked Al alloy casting is subjected to artificial aging treatment at a suitable temp. to precipitate intermetallic compounds or the like from the same solid solution, and hardening is executed.

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HIGH TOUGHNESS AND HIGH STRENGTH ALUMINUM ALLOY CASTING

Publication number: JP6065666 (A)

Publication date: 1994-03-08

Inventor(s): SHIBATA RYOICHI; WATANABE RIKIZO

Applicant(s): HITACHI METALS LTD

Classification:

- International: C22C21/02; C22F1/00; C22F1/043; C22C21/02; C22F1/00; C22F1/043; (IPC1-7): C22C21/02; C22F1/043

- European:

Application number: JP19920247297 19920824

Priority number(s): JP19920247297 19920824

Abstract of JP 6065666 (A)

PURPOSE: To obtain an aluminum alloy casting little in the deterioration of the mechanical property and particularly excellent in toughness even in the condition that the cooling rate of thick part is slow as an automobile parts such as aluminum wheel, suspension device parts. CONSTITUTION: This high toughness and high strength aluminum alloy casting having ≥ 20 mm thickness in a part thereof consists, by weight, 4-8% Si, 0.2-0.6% Mg and $\leq 0.1\%$ Fe, $\leq 0.4\%$ Mn and the balance Al with inevitable impurities is specified as 1.0-4.2 Si (%) XMg (%), and applied with T6 treatment after casting. The Al alloy casting is specified as 0.1-1.0% casting defect ratio in a part of the structure and ≥ 1100 the value of a strength index of the mechanical property in this part [$3 \times$ tensile strength (N/mm 2) $\geq 40 \times$ elongation (%)].

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